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75TH MORSS CD Cover Page

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Toward Cost-Wise Readiness on a “METL” Track

MORRS 2007 WG22

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What if....

- ❑ We had an “in place” system to focus all continuous process improvement for “cost-wise readiness”?
and
 - ❑ It could focus on effectiveness as well as efficiency?
 - ❑ It incorporates best practices and Lessons Learned?
 - ❑ It is applicable across all domains and at any level?
 - ❑ It produces and updates
 - Aligned expectations
 - Mission Readiness and Performance data
 - MOPs/MOEs- “Metrics that Matter”
 - Future systems requirements and DOTMLP-F solutions
 - ❑ AND is primed for LEAN SIX SIGMA Applications!
-

Tire Swing Cartoon



As proposed by the project sponsor.



As specified in the project request.



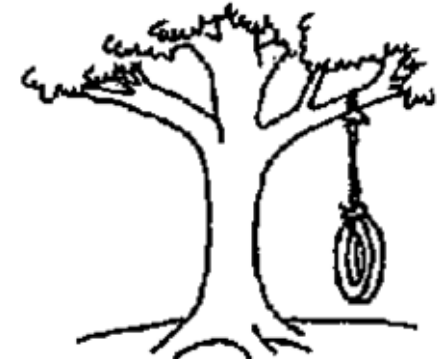
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As produced by the programmers.



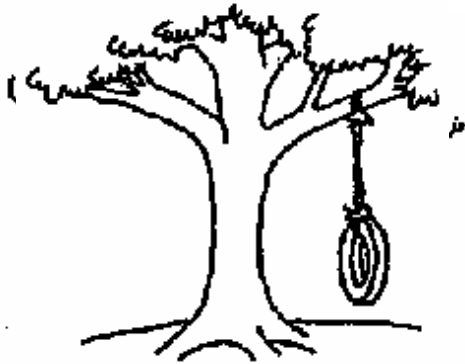
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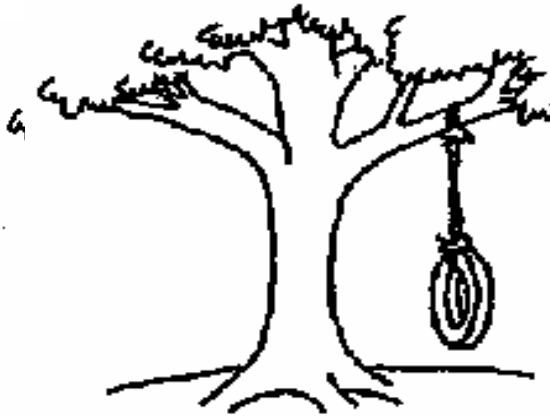
What the user wanted.

<http://www.uoregon.edu/~ftepfer/SchlFacilities/TireSwingTable.html>

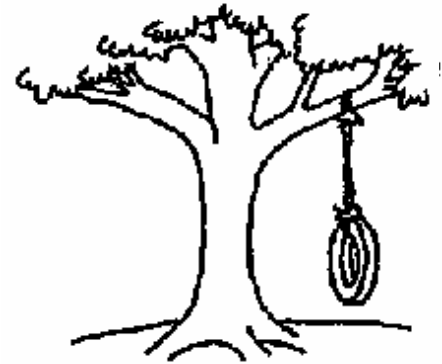
Tire Swing Cartoon- 6



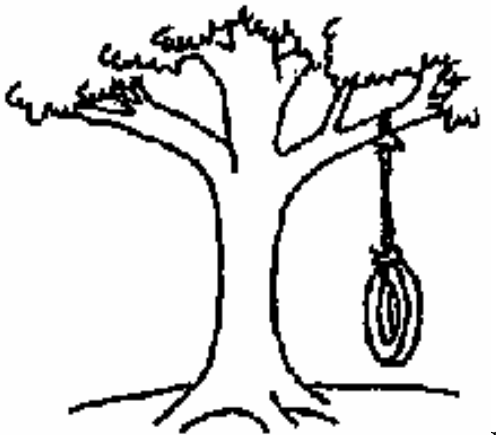
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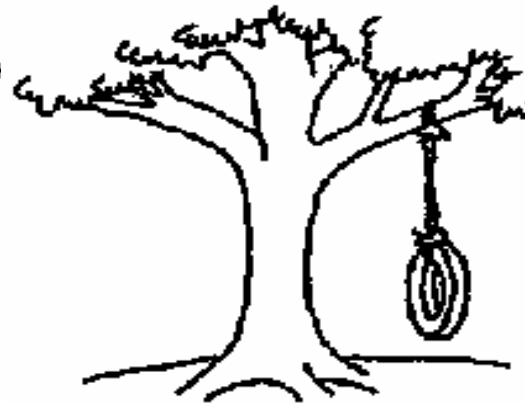
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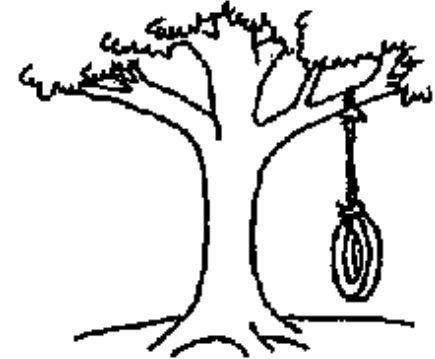
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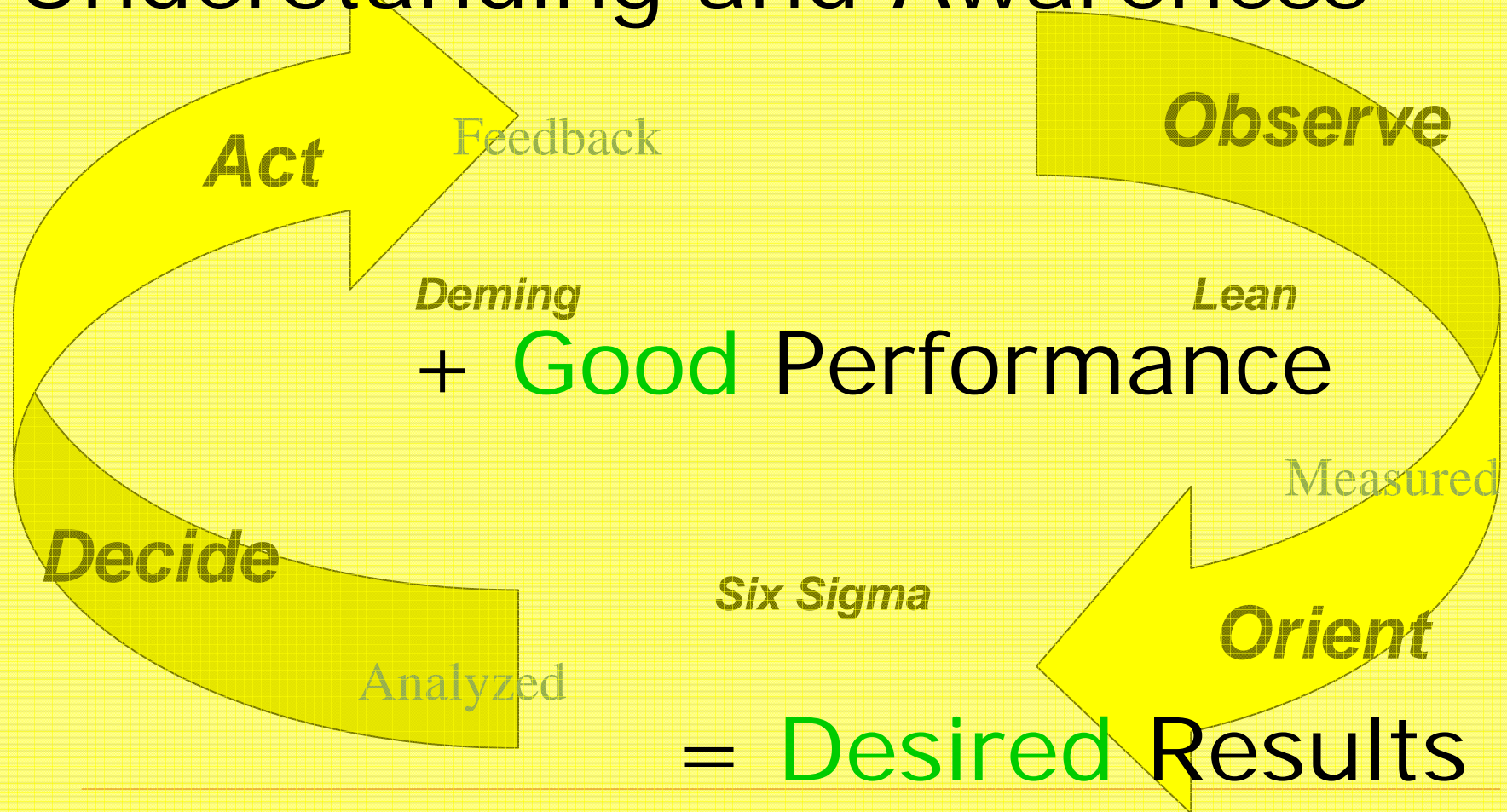


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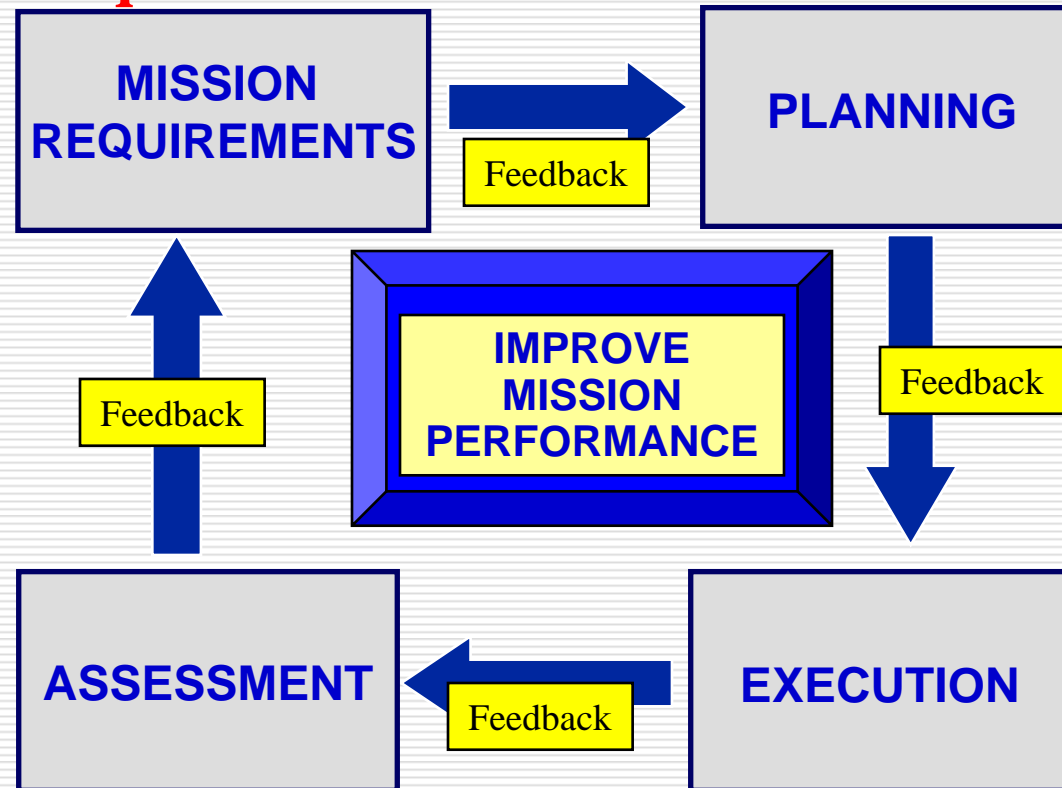
O- O-D-A Sequence to Success

Understanding and Awareness



DOD Transformation and the Capabilities-based Four Phased Model

A Conceptual “Continuous Improvement Engine”
Requirements-Plans-Execution-Assessment



*Use **Lessons Learned** in Ops and Training events to push Transformation
Innovation-flexibility-responsiveness-agility-readiness-accountability-efficiency
“Sustained American competitive advantage in Warfare”*

NMETLs and NWTs: Readiness and Continuous Improvement

- Mission Analysis expresses COCOM and Navy Mission Requirements as “NMETLS.”
 - Mission Analysis-NMETL process can be applied to every new challenge.
 - NMETLs linked up, out, and down to supporting commands.
 - NMETLs align Navy with DOD Training Transformation.
 - Fleet Training aligns to NMETLs.
 - Plans and Accounts for Resources.
 - Gives clear target for H-S-I and systems operator training.
 - DRRS is MET-Based.
- Any entity can report via MET construct.**

Navy Warfare Training System



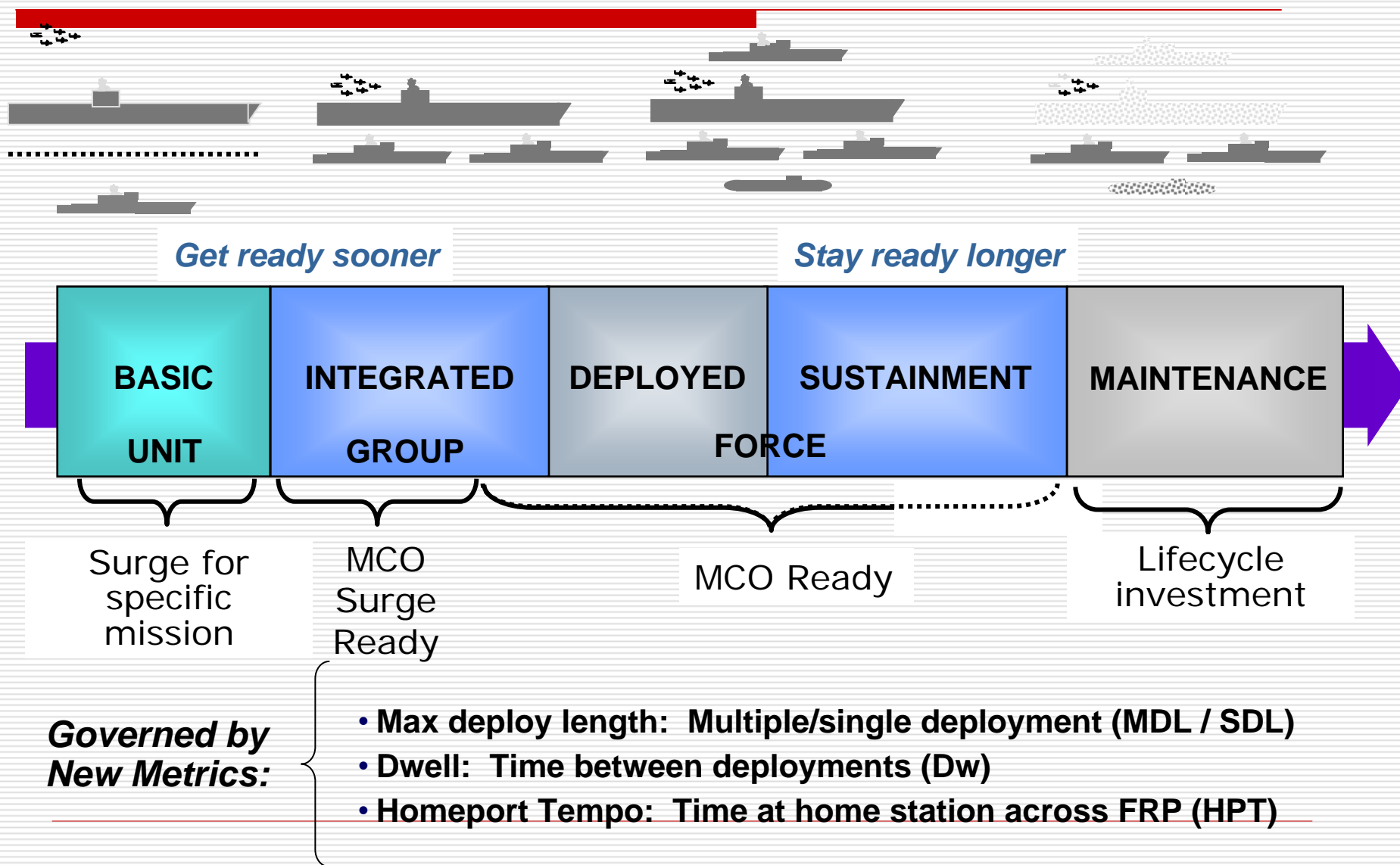
NWTS process integrates Navy Lessons Learned to drive improvements across the DOTMLP-F spectrum

DOTMLP-F = “System”

- ☐ Doctrine
- ☐ Organization
- ☐ Training
- ☐ Material
- ☐ Leadership Development and Education
- ☐ Personnel
- ☐ Facilities

“SYSTEM” in new DOD Terminology

Fleet Response Plan (FRP)



NMETLs and Capabilities-Based Readiness

- ❑ New Defense Readiness Reporting System is MET- based.
 - ❑ Navy METLS supplied from NTIMS
 - ❑ *Readiness* is a confidence factor in being able to get the job done!
 - ❑ Readiness = f {future Met performance}
Future MET performance depends on "DOTMLP-F" stability and "METT-TC"
(another way to think about METL "Conditions")
 - ❑ Early ESORTS both resource and performance history based.
-

DRRS

- ❑ “Near Real Time” readiness reporting.
Eliminates separate “SORTS” messages.
 - ❑ DRRS Readiness screen displays each MET vs each required mission/ capability.
 - MET can be shown with all standards and demonstrated performance values
 - ❑ System generates a recommended score based on authoritative data sources.
 - ❑ Commander’s review/ assessment validates & updates system score-- Mission by Mission, MET by MET and Standard by Standard.
 - ❑ Tools: Aggregation/ Drill down/ Planning capability- “What if...”
-

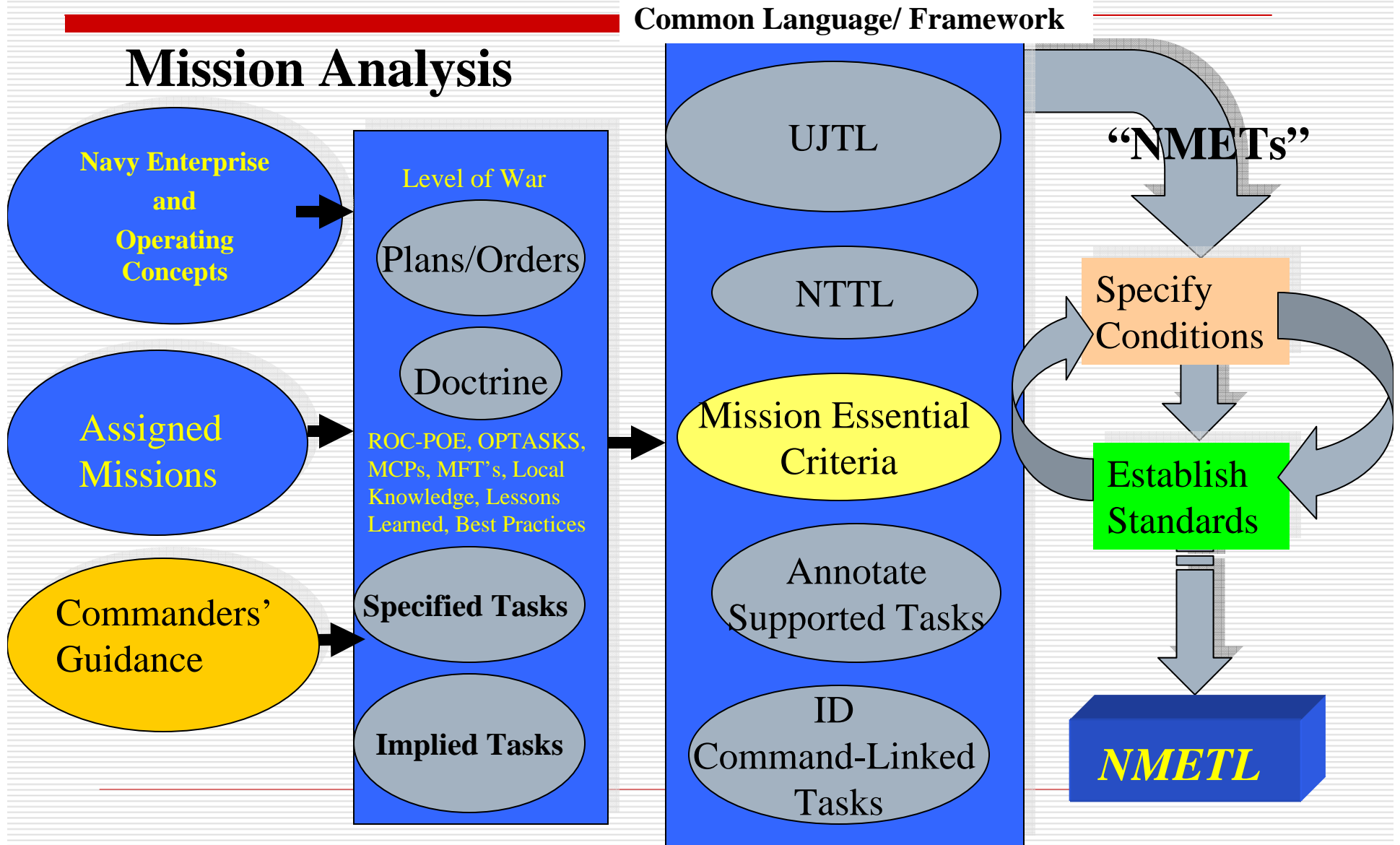
NMETL framework

Perform this task....

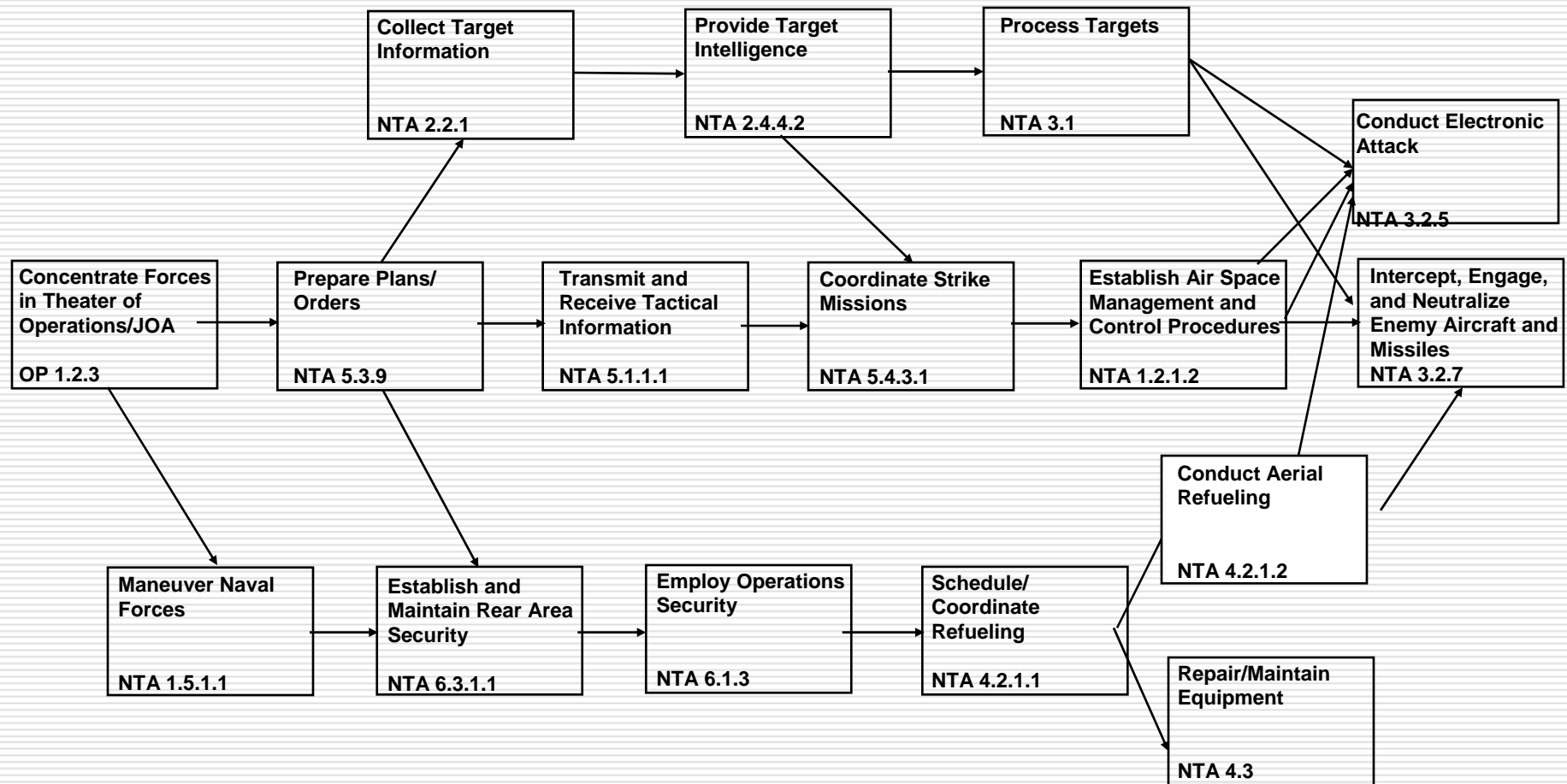
.... Under these conditions....

....To this standard.

The Navy's NMETL Process



Building Mission-Task Capability



From Mission Analysis to NMETL

6 Parts of a "METL"

- ❑ Mission
 - ❑ Responsible Organization
 - ❑ Tasks
 - ❑ Conditions
 - ❑ Standards Measures and Criteria
 - ❑ Linkages Supported/ Supporting
 Links
 Command- Linked
-

Navy Warfare Training System

Requirements

Derived From Assigned Missions

- Based on Commander's Intent, Navy Core Competencies, & Joint/ Navy Doctrine

This Phase Produces:

- NMETL Tasks, Conditions & Standards
- Links to Commands With Roles in NMETL Accomplishment
- NMETL data for DRRS-N

Plans

Driven by Mission Requirements, Training Audience, and Method

- Based on Output of Requirements Phase

This Phase Produces:

- Standardized Training Plans: Fleet, Group, Commander, Staff & Unit
- Synchronized Schoolhouse-FST-Live Training
- Training Resource Requirements (FTCCS)
- De-conflicted and aligned Training Schedules

Assessment

Commander Assesses Training Effectiveness & Navy Training Readiness

- Ability to Meet Navy Standards: Strengths/Weaknesses in DOTMLP-F

This Phase Produces:

- Overall Training & Mission Proficiency Assessments
- DRRS-N (TFIRM) -- \$\$/increase in Readiness
- Key Issues & Lessons Learned
- DOTMLP-F enhancements to improve performance

Execution

Training Conducted & Evaluated

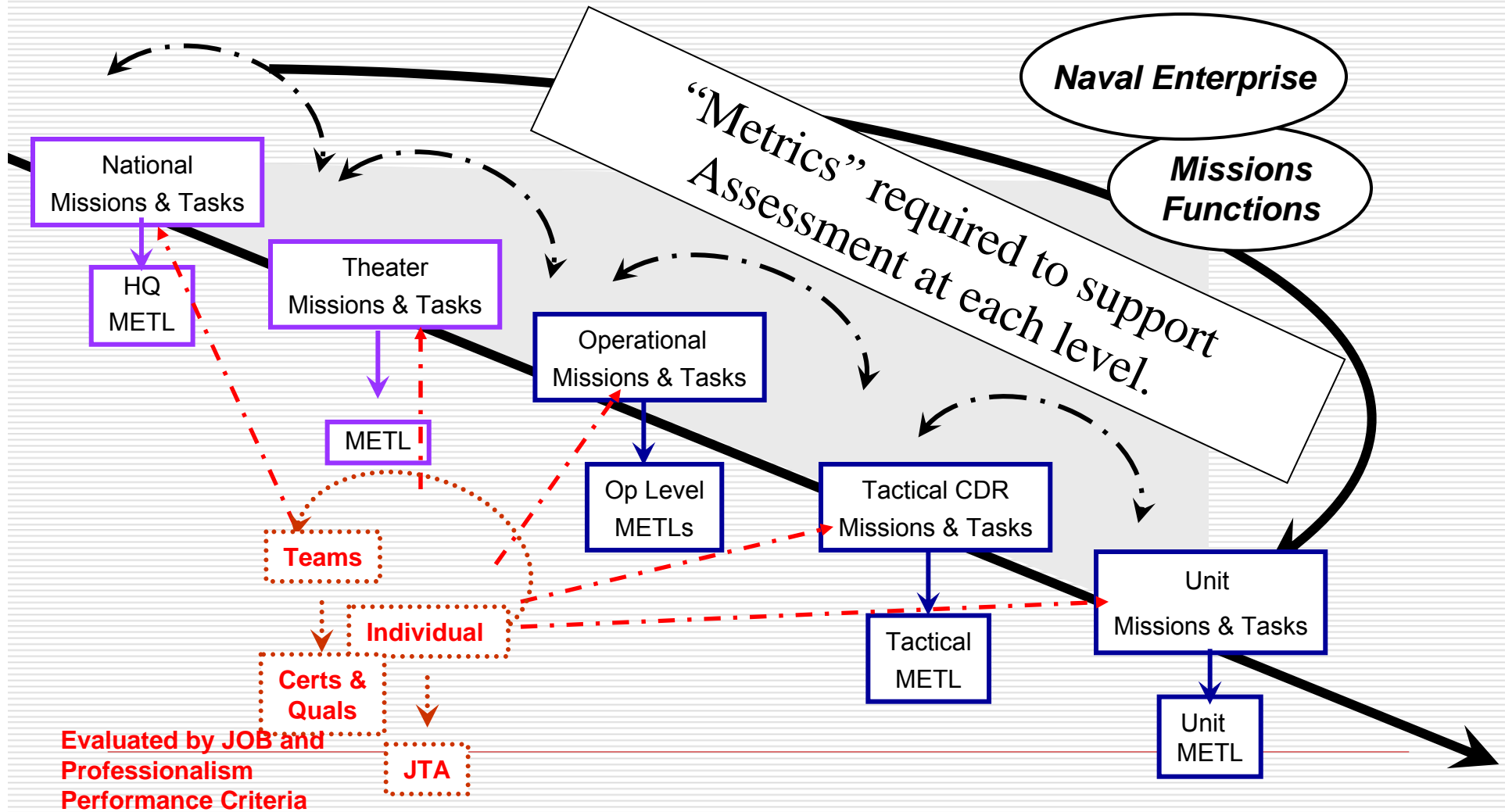
- Training Events Based on Output of Plans Phase

This Phase Produces:

- Performance/ Experience data
- Resource utilization data (FTCCS)
- After Action Reports
- Key Issues & Lessons Learned

Requirements Phase

Generic Operations/ Functions/ Organizations Context



Navy Warfare Training System

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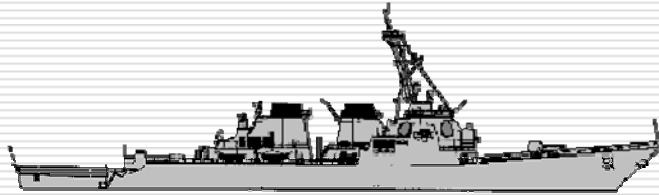
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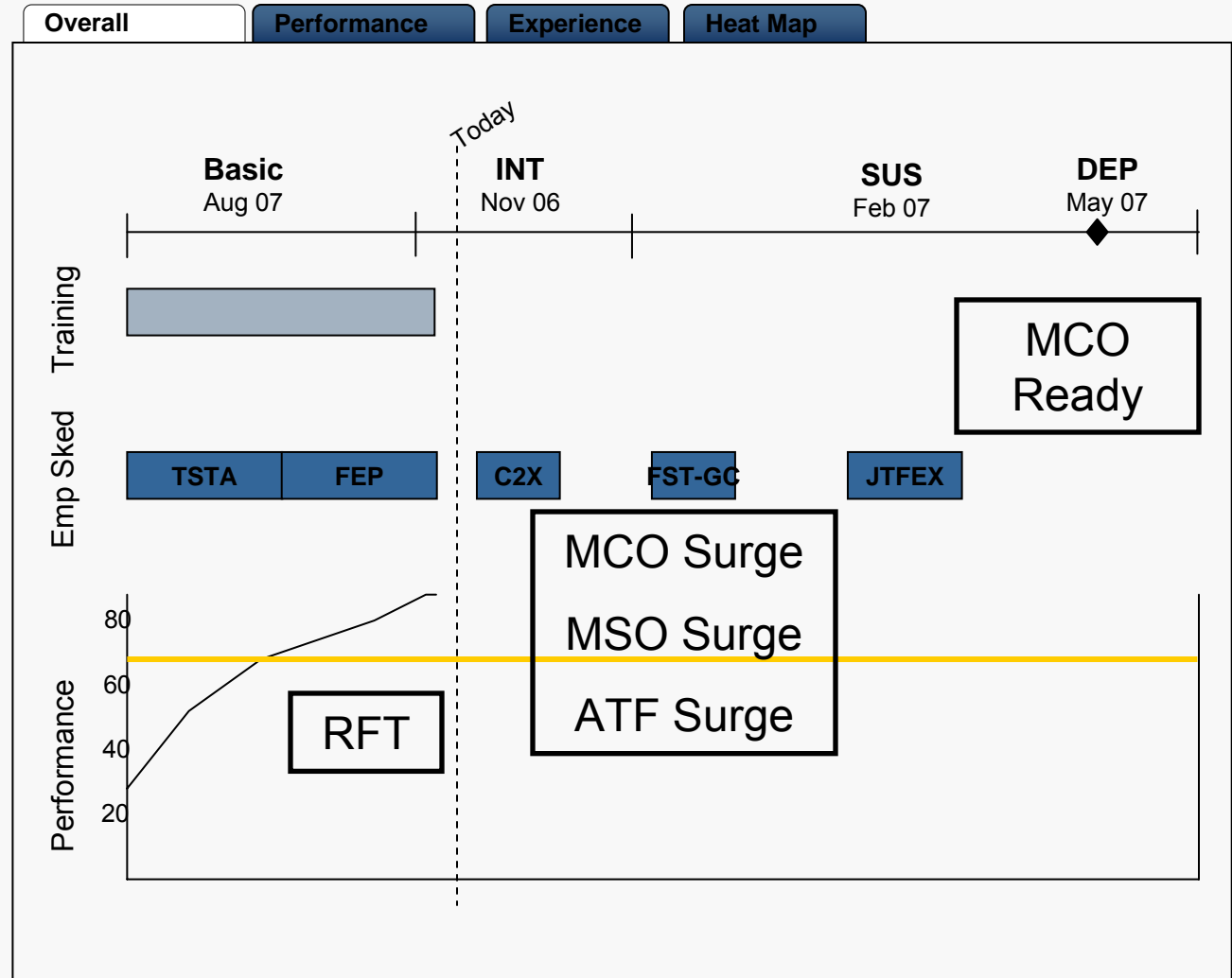
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USS SHIP (DDG55)
Strike Group: ENTSTKGRU
Current Employment: C2X
Scheduled Deployment: 18 JAN 09

Training Readiness Dashboard

| Capability | | |
|------------|----|---|
| ASW | 80 | ↓ |
| ASU | 80 | ↓ |
| AMW | 80 | ↓ |
| CCC | 80 | ↓ |
| C2W | 80 | ↓ |
| INT | 80 | ↓ |
| LOG | 80 | ↓ |
| FSO | 80 | ↓ |
| MOB | 80 | ↓ |
| NCO | 80 | ↓ |
| MOS | 80 | ↓ |
| STW | 80 | ↓ |



NMETL-based NWTP Plans

Navy METL

Organization: CG

Mission: Power Projection

Task: NTA X.X.X.X

Condition: C.X.X.X

Standard: MX

Supported Task: Org+Task

Command-Linked Task: Org+Task

Equipment: Org+Task

Task: NTA X.X.X.1

Condition: C.X.X.1

Standard: MX.1

Supported Task: Org+Task

Command-Linked Task: Org+Task

Equipment: Org+Task

A **training objective** is a statement that describes the desired outcome of a training activity. A training objective is derived from Navy mission essential tasks, conditions, and standards. Objectives may be for individuals or teams.

1. Detect Surface Targets

2. Track Surface Targets

3. Localize Surface Targets

4. Attack Surface Targets

5. Monitor System Status

6. Update Track Attributes

7. Resolve Track Ambiguities

8. Transmit SITREP

The supplies or support needed to accomplish a training event and sub event.

ULTRA II: SUWEX 1

Training Audience: SUW Team

1. Detect Surface Targets

2. Track Surface Targets

3. Localize Surface Targets

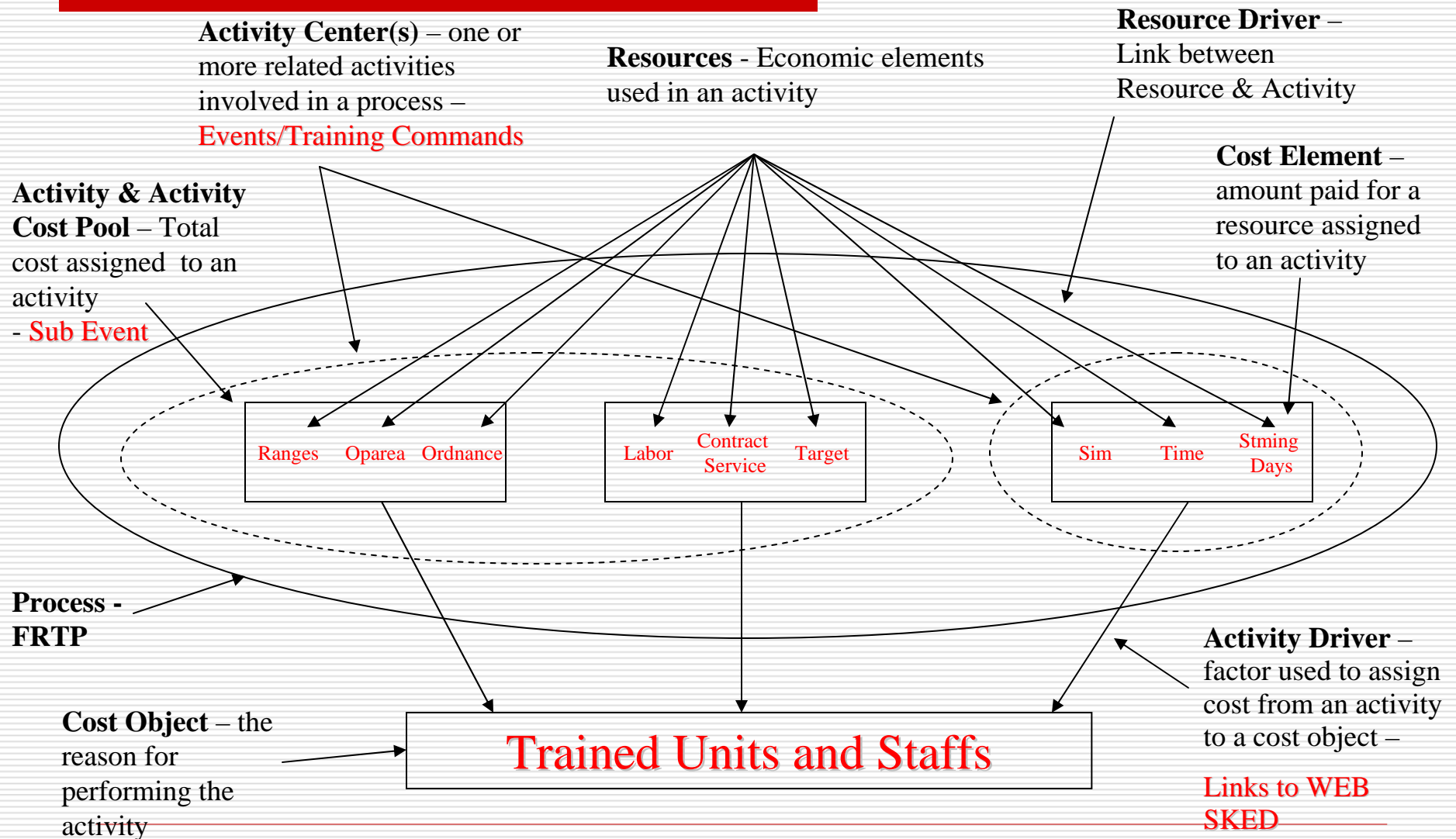
7. Resolve Track Ambiguities

8. Transmit SITREP

- a. 8 Hours
- b. BFTT
- c. 4 Instructors
- d. Programmed Scenario

An **Event** is a significant Operational Employment during which training is accomplished.
A **Sub-Event** is an occasion when actual, specific training is scheduled and conducted to accomplish a specific Training Objective(s).
A Sub-Event is part of and tied to an event.
LINKED TO WEBSKED

Fleet Training Capability Cost



Fleet Training Capability Cost System

Activity Center(s) – one or more related activities

Resources - Economic elements

Resource Driver – Link between

We will understand how much an improvement in Readiness and an Operational Capability Costs!

Cost Object – the reason for performing the activity

Trained Units and Staffs

cost from an activity to a cost object –

Links to WEB SKED

Navy Warfare Training System

Requirements

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Data Requirements

- ☐ Crew/ Operator/ Commander Performance and Experience
 - ☐ Systems Performance
 - ☐ Training Systems Performance
 - ☐ Resource Expenditures
 - ☐ Actual Conditions
-

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Assessment

- ❑ Near real time assessments
- ❑ Assess Training Effectiveness & Readiness
 - Ability to Meet Navy Standards:
- ❑ This Phase Produces:
 - Overall Training & Mission Proficiency Assessments (DRRS-N)
 - Enterprise “T” pillar information
 - “Track history” on task performance
- ❑ Supports:
 - Analysis of task performance
 - View across force “metrics”
 - Cues potential DOTMLP-F fixes
 - Training resource decision making (FTCCS)

NMET Training Readiness – USS BHP (DDG55) – Power Projection

Show: ☒ Red ☒ Yellow ☒ Green

Index: [Index Text] ▼

| NMET | DRRS-N Normalized Training | Training Readiness | Performance Factor | Experience Factor | Calculation Date | Actions |
|-------------------------------------|----------------------------------|-----------------------|-----------------------|----------------------|---------------------|---|
| NTA 1 – Provide Mobility | 80 | 50 | 100 | 50 | 17 July 2006 | ↑  |
| NTA 2 – Provide Intelligence | 80 | 50 | 100 | 50 | 17 July 2006 | ↑  |
| NTA 3 – Provide Firepower | 80 | 45 | 70 | 70 | 17 July 2006 | ↑  |
| NTA 4 – Provide Logistics | 72 | 35 | 100 | 35 | 17 July 2006 | ↑  |
| NTA 5 – Provide Command and Control | 50 | 25 | 50 | 50 | 17 July 2006 | ↑  |
| NTA 6 – Provide Force Protection | 72 | 35 | 100 | 35 | 17 July 2006 | ↑  |

<< Previous (1-6 of 20) Next >>

A Readiness Assessment

Hypothesis:

- Successful accomplishment of every MET = Mission Success.
 - Mission Readiness = Confidence in Future Mission Performance.
 - Confidence in Future Mission Performance = $f \{ \text{most recent performance, mean, trends, changes to DOTMLP-F, time, Conditions,} \}$
 - = Σ Confidence in future Individual MET performance.
-

A MET Confidence Example

Confidence that a given unit will achieve a given Performance level on a specific task with given Conditions

= f {recent MET performance, trends, changes to DOTMLP-F, METT-TC}

NMET Example (Less specified Conditions & Standards) for CG Power Projection:

- ❑ NTA 3.2.2 Attack Enemy Land Targets
 - ❑ Commander's Assessment: "They can do it well." Based on the following:
 - Recent Task performance exceeded all standards. (And Standards are traceable to COCOM mission requirements.)
 - CG's Performance "continually" improving. (Can show graph of sub-event evals)
 - No changes in watch teams, equipment or people. (Stable system)
 - No new DOTMLP-F to incorporate. (Simplifies mission rehearsal)
 - Minimal degradation due to Time between MET accomplishments. (Based on experienced judgment of Commander and amplified by NWTS data. (Forgetting Curve)
 - Other environmentals (conditions) unchanged. (Stable system)
-

NMETL framework & DRRS-N

Perform this task....

.... Under these conditions....

....To this standard.

“ESORTS” captures Resource Requirements to meet the standard.

DRRS-N (ESORTS)

DRRS-N Readiness display will also include resource categories:

- "P" Personnel requirements for the NMET
- "E" Equipment requirements for the NMET
- "S" Supply/ sustainment requirements for the NMET
- "T" Training requirements for the NMET
- "O" Ordnance requirements for the NMET
- and soon----
- "F" Facilities requirements for the NMET

TFIRM Cross Functional Teams (CFTs) working on specifics. Stay tuned for updates!

NMETs to ESORTS to Systems

NMETL

NMET

Task

Conditions

Standards

- Measure + Criterion
- “Measures” show us what to measure
- “Criterion” is the target value

DRRS

Based on each NMET Standard, ESORTS needs to fill certain factors:

- Personnel
 - Equipment
 - Supply
 - Training
 - Ordnance
 - (soon) Facilities
- These must be met to ensure the NMET standard can be accomplished.

Continuous Improvement

Based on each PESTO(F) factor

Each requires a “DOTMLPF” system that meets the specs-standards.

One objective is to create a performance confidence/ predictability.

CNO Sea Enterprise

1. Senior leaders must drive transformation by setting aligned expectations. – NMETL Standards.
 2. Leaders must create a continuous improvement culture by defining and measuring outputs, balancing risks and ensuring accountability. – NWTs process is a CPI engine.
 3. Navy-wide alignment of organizations and processes must share best practices, leverage core competencies, and become more efficient and effective. -- NWTs process runs on Lessons Learned.
 4. All must embrace best practices and employ lessons learned in a continuous improvement process. -- In step w/ NMETL-based NWTs! This process is LEAN SIX SIGMA ready!
 5. All must develop “business acumen.” Leaders must become knowledgeable about the systems and processes leading to greater efficiency and effectiveness. -- A “Navy Ops Analysis System”– or “Readiness Enterprise” System or “Capabilities Development” System– one common process-many adaptations.
-

Universal Applications for METLs

- ☐ CONOPS development
- ☐ Training Transformation: Joint and Navy Warfare Training Systems
- ☐ Defense Readiness Reporting System
- ☐ All DOTMLP-F systems -- "Capabilities" development
 - System architectures and specifications (DOD AF)
 - FORCEnet
 - Simulators, stimulators and emulators
 - Sea Power 21 and MCPs
- ☐ Test, Evaluation and Experimentation
 - Joint Concept Development and Experimentation, Sea Trial
- ☐ Capabilities-based Planning
- ☐ Navy Enterprise and Establishing Management Controls
- ☐ ROC-POE constructs

CONOPS and NMETLS

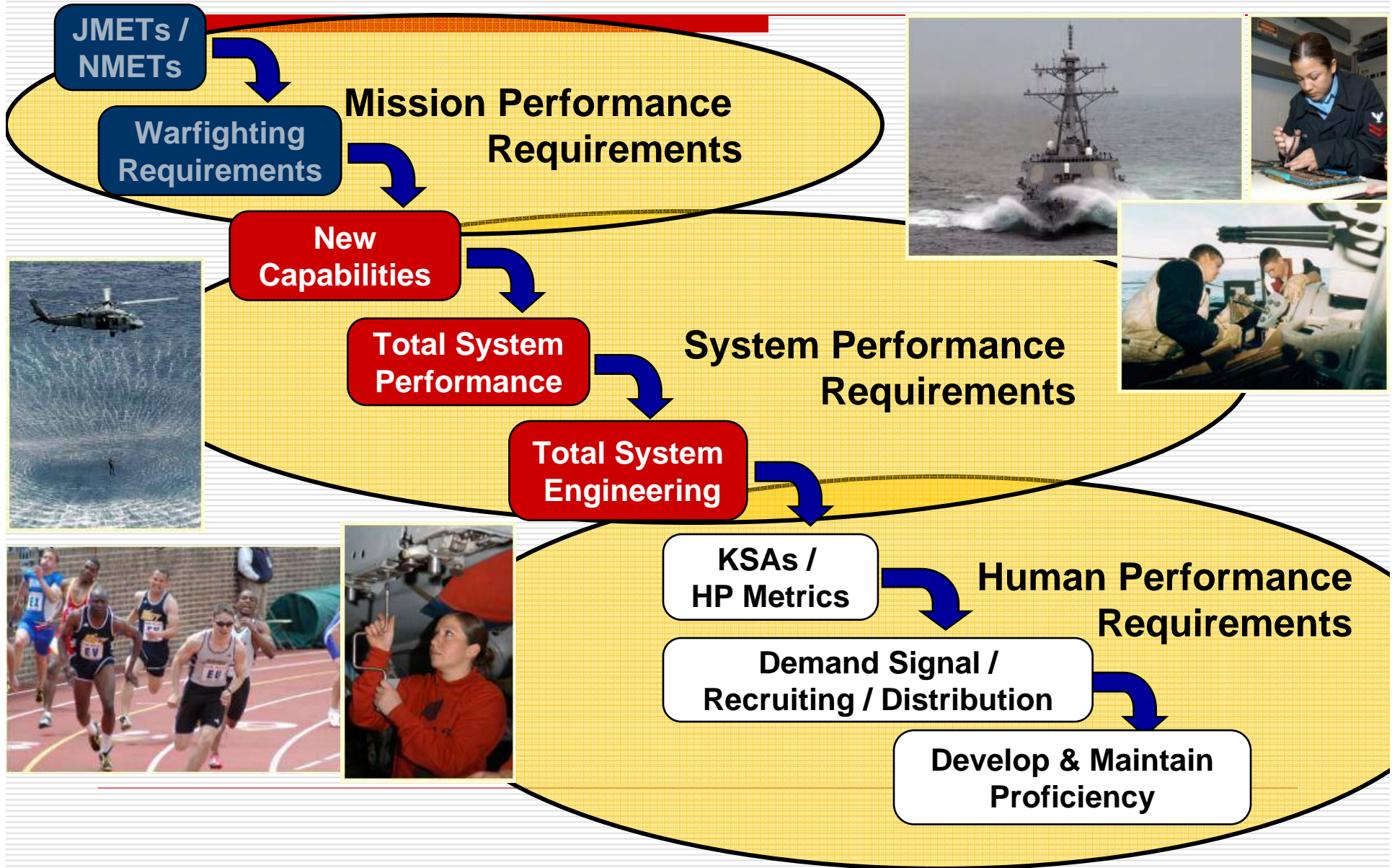
Both are products of Mission Analysis

METLS say what and how well; CONOPS describe How

- ❑ Going in with no CONOPS, NMETL helps frame it.
 - ❑ Going in with CONOPS, NMETL helps improve it!
 - ❑ The primary purpose of the NMETL is to be the target and alignment tool for all improved mission performance.
 - ❑ The NMETL itself should be improved whenever we can advance the articulation of the tasks, conditions or standards or supporting commands' responsibilities.
-

NAVSEA H-S-I Slide

From Requirements (METs) to Proficiency



Welcome into the world of NMETLS

Bewilderment

Confusion



"Careful, could be a trick."

Development
Phases

Denial

Hostility

Understanding

Advocacy

NMETLs and NWTs: Readiness and Continuous Improvement

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Navy Warfare Training System



NWTS process integrates Navy Lessons Learned to drive improvements across the DOTMLP-F spectrum